G. Nell STEVENS* & Hiroyuki KASHIWADANI**: **Synonymy of *Ramalina intermediella* Vain. with *R. peruviana* Ach.**

G.N. スティーヴンス*・柏谷博之: *Ramalina intermediella* は *R. peruviana* の異名である

In 1921, Vainio applied the name *Ramalina intermediella* to *Ramalina* material found in Inaba, Japan. He reported it was subsimilar to *R. subfarinacea* Nyl. In 1939, Asahina reported the presence of sekikaic and ramalinolic acids in *R. intermediella.* He also stated that *R. intermediella* was different from European species of *R. farinacea,* but neither lichenologist associated it with *R. peruviana.*

Recent chemical analysis has shown that *R. intermediella* contains homosekikaic, sekikaic, ramalinolic, 4′-O-demethylsekikaic, unknown, 4′-O-methylnorhomosekikaic, and 4′-O-methylnorsekikaic acids. This sorediate species occurs in coastal situations in Japan and Formosa. It shows a degree of morphological plasticity from fine irregular branching with punctiform soralia to open subdichotomous branching with round to elongate soralia. The type material is held at TUR.

The name *Ramalina peruviana* Ach. has been established since 1810. The specimen was described by Acharius as: "Thallo plano-compresso ramosa cinerascente, ramis angustatis undulatim tortis margine inaequalibus apice lacero-subdigitatis. Habitat in Peruvia". Type material is held at H, UPS, FH and BM; the holotype is at H. All pieces are very small and poorly preserved with the soredia difficult to distinguish. Krog & Swinscow (1976) established that the type material contained the sekikaic aggregate of acids, and one of the author (Kashiwadani) found that the acids were identical with those of *R. intermediella.*

All recent collections of material regarded as *R. peruviana* which were analysed during this study contained similar acids (e. g. Material from Australia,

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New Zealand, Tristan da Cunha, East Africa, Brazil, Uruguay, Argentina and some fresh material from Peru collected by Kashiwadani).

Ramalina peruviana produces a continum of forms from dense irregularly branched and richly sorediate thalli, to sparse dichotomously branched thalli with punctiform to elongate soralia along the branch margins, a morphology which *R. intermediella* parallels.

Anatomical examination of *R. intermediella* thalli from Japan and *R. peruviana* thalli from Australia and South America has shown that all have distinct cortex and discontinuous mechanical tissue (chondroid tissue) without cracks (Fig. 1).

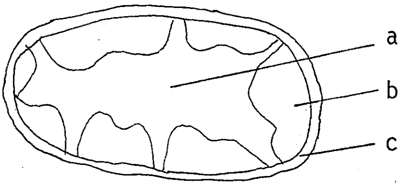

Fig. 1. Transverse section through branch. a. medulla. b. mechanical tissue. c. cortex.

The production of apothecia in both species is uncommon, but when these occur the spore sizes were found to be in the same range, e.g. (14-)16-19 × 3.5-4 μm and of similar shape fusiform, straight, or rarely slightly curved.

Ramalina peruviana occurs in both inland and coastal situation, and appears to have a wide distribution, based on recent records of this taxon: East Africa (Krog & Swinscow 1976), Brazil, Uruguay, Argentina (Osorio 1968, 1972, 1982), New Zealand (Galloway 1985), Tristan da Cunha (Jørgensen 1978), West Indies (Landron 1972) and Australia (Stevens 1978, 1985, 1987). It has also been collected by one of the authors (Stevens) in Hawaii & Tahiti. No record of this species occurs for the Northwest Pacific region, but *R. intermediella* grows coastally in this area.

It is therefore proposed that *R. intermediella* is to be reduced to synonymy with *R. peruviana*.

Ramalina peruviana Ach., Lich., Univ. 599. 1810. Type collection: Peru, Lagasta (H-Ach 1801—holotype).

Ramalina intermediella Vain., Bot. Mag. Tokyo **35**: 46. 1921, syn. nov. Type collection: Japan, Honshu, Prov. Inaba, A. Yasuda 150 (TUR—holotype, TNS—isotype).

Representative specimens examined: Japan. Honshu, Prov. Tohtomi, Kawasaki-machi, Haibara-gun, S. Kurokawa 51904 (TNS). Prov. Izumo, Sadagunai, Yatsuka-gun, H. Kashiwadani 8817 (TNS). Shikoku, Prov. Awa, Maigadani, Naka-gun, H. Kashiwadani 14831 (TNS). Kyushu, Prov. Hizen, Nagasaki, Y. Asahina & M. Togashi s. n. (TNS). Australia. Queensland, Maleny, Maleny Ra., N. Stevens 4323NS (BRIU). Mt. Mee, N. Stevens 3353NS (BRIU). Somerest Dam, N. Stevens 3624NS (BRIU). St. Lawrence, N. Stevens 4102NS (BRIU). New South Wales, The Channon, N. Stevens 3785NS (BRIU). Brazil. Rio grande do sul Montenegro, H. Osorio 7765 (Herb. Osorio). Aragentina. Prov. Salta, Oran, Rio Pescado, Pintas-Cavo, D. Grassi 5510 (Herb. del Instituto Miguel Lillo). Uruguay. Rocha-Laguna Castillos y arroyo, Valizas, H. Osorio 5631 (Herb. Osorio). Peru. Dept. Lima, Prov. Chancay, in coastal lomas, ca. 100 m, H. Kashiwadani 22610 (TNS).

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コフキカラタチゴケ(*Ramalina intermediella* Vain.)は鳥取県で採集された標本をもとにVainio (1921) によって記載された樹枝状地衣類で，これまでに日本および台湾の低地に分布することが知られていた。本種は地衣体が基部で密に分枝し長さ5-10 cmとなり，細長い地衣体上に楕円形の粉芽を持つことで特徴づけられる。かつて日本産カラタチゴケ属を研究した朝比奈博士(1939)は，本種にセッカ酸とラマリノール酸が含まれることを明らかにするとともにヨーロッパに広く分布する *R. farinacea* Ach. に近縁であることを報告している。近年著者らは基準標本を含む日本および台湾産の *R. intermediella* の化学成分を検討し，この種類はホモセッカ酸，セッカ酸，ラマリノール酸を主成分とし付随成分として 4′-O-demethylsekikaic acid, 4′-O-methylnorhomosekikaic acid, 4′-O-metyylnorsekikaic acid 等を含むことを明らかにした。また本種の地衣体は明瞭な皮層と亀裂を生じない軟骨状組織(図1)を皮層の内側に持ち，(14-)16-19×3.5-4 μm の子嚢胞子を生じることも明らかになった。これらの諸形質は太平洋沿岸一帯に広く分布する *R. peruviana* Ach. と形態，化学成分ともに完全に一致するので，*R. intermediella* は *R. peruviana* の異名となることが明らかになった。*R. peruviana* の基準標本はペルーで採集されたものであるが，ペルーでの生育状況に関する報告は全くない。柏谷は1984年に同国を訪れた際，coastal lomas と呼ばれる半砂漠地帯の灌木上に生育する本種を確認した。

□木村陽二郎：**私の植物散歩** 226 pp. 1987. 筑摩書房，東京. ¥1,400. 春，夏，秋，冬に分けて，その時期の植物に関する随筆集である。取り上げられた植物は桜，椿，菜の花，アシ，マコモ，ユリ，アヤメなどごく身近なものが多い。これは「小原流挿花」に昭和59年から3年間に亘って執筆したのをまとめたもので，その読者層によるためと思われる。しかし博識な著者のことだから，その内容は古今に渡る書物や現地での見聞を取り入れて植物学者でなければ書けない，興味ある読み物となっている。ひとつだけ気になるのはタヌキノショクダイの発見の経過が不充分なことで，これは阿部近一氏の図を見た津山尚博士が，図はいいかげんなものでなく，熱帯地方に似たものがあって，ヒナノシャクジョウ科の大変珍しい植物だということで問題にされたことから，騒がれ始めたのである。実物の研究は，当時東京大学に内地留学されていた赤沢時之氏が行った。イチョウの精子発見と池野誠一郎氏との関係の経過が不明となっている例もあるので，記録は後の為にも省略せずに記していただきたい。挿入されている図は山田寿雄，水島南平，加納川邦之助氏など主に戦前に活躍されたすぐれた植物画家のものが多く使われている。　　　　(山崎　敬)